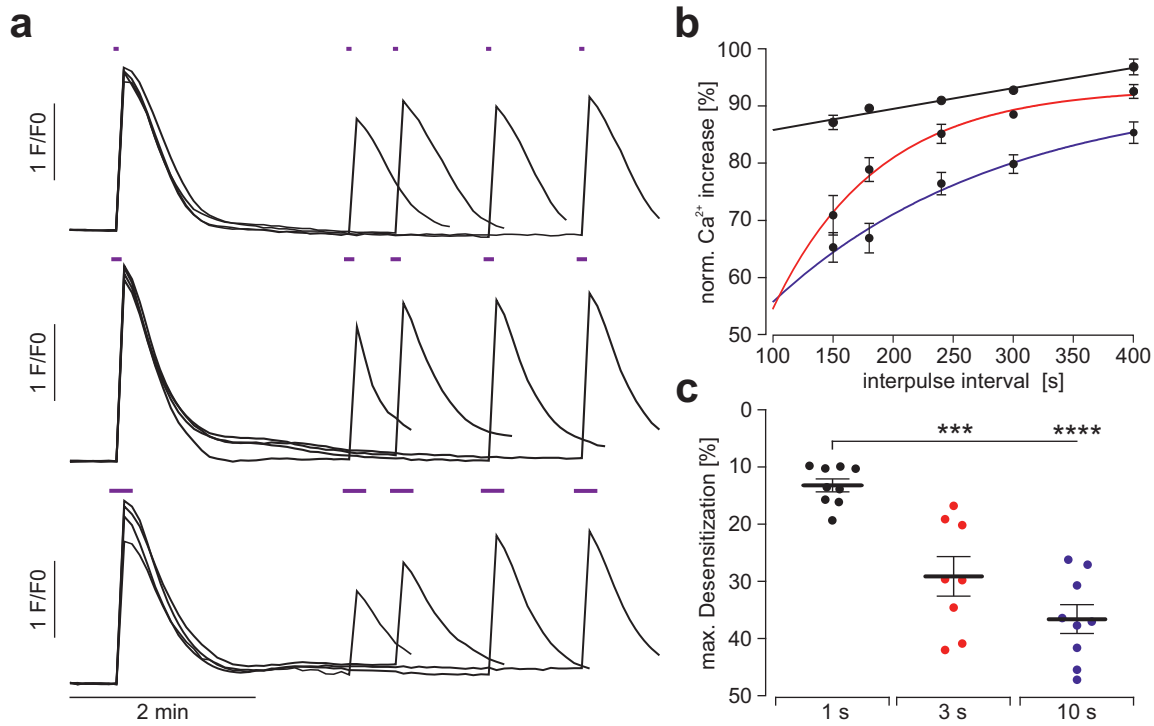
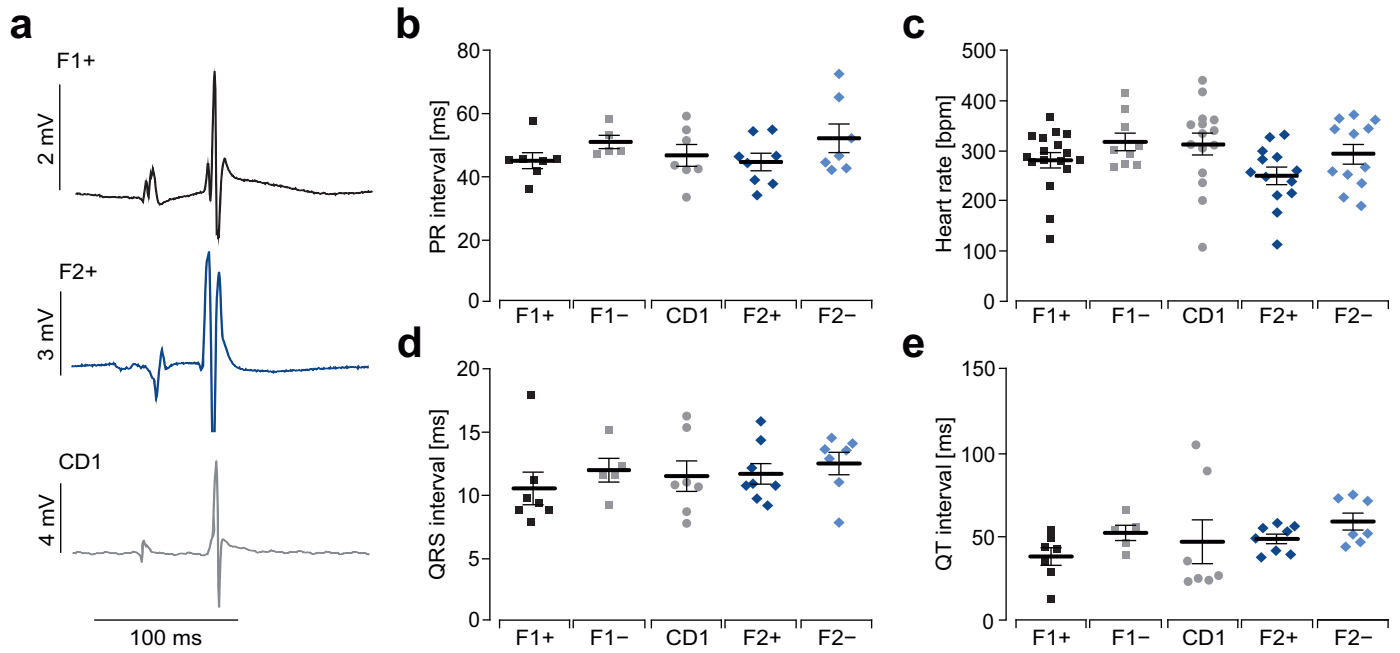


Wagdi et al., 2022: Supplementary Figure 1



Supplementary Figure 1: Desensitization and recovery from desensitization of light induced Ca^{2+} transients in HEK cells. **a**, Representative traces of Ca^{2+} transients induced by paired pulses of 1, 3 and 10 s long light pulses (violet bars, 1 mW/mm^2) with increasing interpulse intervals (150, 180, 240, 300 s). **b**, Average normalized Ca^{2+} transient amplitudes in dependence to the interpulse interval and the respective one phase decay fits (1 s: black fit, $n = 9$; 3 s: red fit, $n = 8$; 10 s: blue fit, $n = 9$). **c**, Statistical analysis of the effect of the pulse duration on the maximal desensitization (relative decrease) with an ordinary one-way ANOVA with Tukey's multiple comparison test ($p(1 \text{ vs. } 3 \text{ s}) < 0.001$; $p(1 \text{ vs. } 10 \text{ s}) < 0.0001$; $p(3 \text{ vs. } 10 \text{ s}) = 0.11$). Each dot represents the mean of one coverslip. Data are presented as mean values $\pm$ SEM.

Wagdi et al., 2022: Supplementary Figure 2



Supplementary Fig. 2: Basal electrocardiogram (ECG) parameters in hOPN5 mice recorded *ex vivo*. **a**, Representative electrogram recordings from hearts of hOPN5 founder line F1 (black), founder line F2 (blue) and CD1 wild type control mice (gray). **b-e**, Statistical analysis of basal ECG parameters PR interval (b), heart rate (c), QRS interval (d) and QT interval (e) in F1 and F2 hOPN5 expressing hearts (F1+, F2+), from their negative littermates (F1- and F2-) and CD1 wild type controls. To exclude rate dependent effects, only electrogram recordings with a heart rate between 250 and 350 bpm were taken into account in b,d and e. Each dot represents the average from one individual heart. Statistical analysis was performed with ordinary one-way ANOVA test (all p values ≥ 0.096) and Tukey's multiple comparison test (all p values ≥ 0.11). Data are presented as mean values $\pm$ SEM.

Wagdi et al., 2022: Supplementary Figure 3

